

# LOCKHEED 12



Get ahead, get a hat – some 1930s scene-setting in the Lockheed's cabin



**Great aircraft don't really have owners, just custodians with a duty to improve, maintain and enjoy, says Ian Seager. Photos Ed Hicks**

**W**e're making our way along taxiway Alpha at Jacksonville's Craig airport. The Lockheed gently bobs up and down as the 30x13 main wheels flex their sidewalls. Inches away from the fuselage two huge, polished propellers, driven by gently burbling 450hp Pratt & Whitneys, caress the air and cajole it over the polished wings. I'm sitting in the right-hand seat surrounded by the most perfectly restored aeroplane I've ever seen, let alone sat in, let alone flown.

David Marco, the Lockheed's owner and occupier of the left-hand seat, must think I'm some kind of Brit weirdo as he spots me stroking the leather of the control wheel, touching the black crinkle finish of the

panel and caressing the Bakelite at the end of the mixture levers. I'm convinced that I can actually taste the history with every breath I take, and try as I might, I can't rid my face of an inane-looking grin. I glance back at the passenger cabin and for a split second I'm surprised not to see an oil company executive with his homburg hat and pencil moustache sitting alongside, and perhaps a little too close, to his white-gloved, pleat-skirted secretary. Deep breath, inhale a bit more history, enjoy the moment. The modern world interrupts as Craig Tower bursts into life through the David Clark ANRs. Some guy in a C150 gets joining instructions and traffic information in a continual stream without the controller pausing

for punctuation or for another breath. It's gloriously calm in here, busy, bustling and stressful out there.

Before taking the runway, we run through the checks for each of the big P&Ws. Although the engines are run up to 1,800rpm in turn, it feels wonderfully remote sat up here, our backsides a good six feet off the ground. Everything is fine and we brief the take-off. Dave tells me that he has no plans to fail anything, so if something does happen it'll be for real. There are two big, guarded, red organ-stops at the top of the panel; pushing them in will feather the related propeller. We know they both work and I know exactly where my hand is going should the need arise. Dave casually

mentions, in passing, that it can all get a bit loud in the cockpit. A quick check that Joe and Ed are ready in the photo aircraft, a call to the Tower controller and we're cleared to line up and take off. On the runway the fuel pumps go on, and when we're lined up the tailwheel is locked. Power is brought up to 25 inches, everything is in the green and we're good to go. Take-off power is about 35 inches and 2,300rpm, and somewhere between 25 and 35 inches and without warning, the gentle, luxurious, lumbering Lockheed turns into a fire-spitting, eardrum-busting beast.

The engine's soothing and melodic bass notes are shoved aside by a rush of avgas and replaced by

a monumentally thunderous roar. The propellers are no longer cajoling the air, but thrashing each and every molecule into submission, and each bullied bit of air is screaming obscenities about the violent assault. The prop tips, not quite supersonic, are still describing their wide arc at something like Mach .97, and if that's not enough of a sensory onslaught the whole thing is accompanied by a high frequency vibration that's making its way through my body via my backside – think sitting on a two-stroke chainsaw at full chat.

The Lockheed is now starting to hurry down the runway and out to my right I briefly catch sight of Joe and Ed waiting at the hold in the C182. I swear I can

see them both, eyes wide open, ears bleeding and mouthing "Awesome!" in unison as they are overcome by the overwhelming combination of polished aluminium beauty and a wave of raucous decibels. The inane grin has gone, a huge smile now in its place, I might even be dribbling. 1938 aviation is truly magnificent.

Passing through 500ft, the power comes back to 30 inches and the props come back to 2,000 or thereabouts. In an instant serenity returns, and the Lockheed's engines resume their reassuring and contented rumble as we cruise climb to the south in perfectly smooth air. Before long, I'm breathing normally again.



**Polished perfection**

Three-and-a-half hours earlier we'd landed our tired but functional Cessna at KCRG or 'Jacksonville Executive at Craig' to give it its full and somewhat clumsy name. At that point we hadn't yet met David Marco, but his email suggested we land and ask for taxi to the Marco hangar... request duly passed after landing, the controller helpfully replies, "Eight Four Juliet, vacatextrightthenrightonalphaleftonbravorightondelta... it's the big brown hangar on the right"

We pull up and shut down in front of the aforementioned big brown hangar and as the last blade bounces to a stop, the three of us in the Cessna look at

each other and quietly smile, not because we've once again cheated death, but because we can see inside the 12,500sq ft hangar. Inside, sat behind a pristine Decathlon and next to a stunning de Havilland Beaver on amphibious floats and a Citation CJ2+ sits the gleaming Lockheed 12, officially known as a Lockheed Model 12A Electra Junior. Two-and-a-half tonnes of very polished aluminium and very polished paint sit on a very polished floor. David Marco clearly has a thing about aeroplanes and hangars being in perfect condition.

NC18097 was built in 1938 and is one of just 130 Lockheed 12s to be built and eight still flying. Back in 1936, the US Bureau of Commerce sponsored a



There's attention to detail, and there's obsessive restoration. This is the latter – beautifully embroidered Lockheed logo, authentic switch gear, specially woven fabrics, the original coffee station complete with oiled rather than varnished cabinetry. Operating any control, whether power for the pilots or cabin comfort for the executives in the back is a tactile delight



Pulling the blades through will save the engine in case of hydraulic failure, but the gloves are there to avoid fingerprints rather than protect David's fingers

competition for a new feeder airline, and Lockheed decided that a scaled-down Lockheed Electra 10 (the type that Amelia Earhart used) would fit the bill. Even on the drawing board the 12 was touched by genius as the legendary Kelly Johnson designed the twin tail while the undercarriage was designed by Lloyd Stearman. Powered by the same 450hp Pratt & Whitney R-985s as its bigger brother, the six-seat-plus-two-crew aircraft proved to be faster (225mph) than the bigger model 10, and much more popular with businesses than it was with airlines, which is why it's often referred to as the Lear of its day. NC18097 was owned and operated by Phillips Petroleum. Incidentally, the C in the registration dates back to the 1920s when it was decided that C for commercial should prefix the numbers in a US registration.

In 1941, Lockheed ceased production in order to devote more resource to the war effort and the market segment was left largely to the Beech 18, or the 'ugly little sister' as it's cruelly known in some Lockheed circles. Of course, the Lockheed 12 saw military service with both the US Army and Navy where it was used mainly for staff transport. That's a very dull role for such a beautiful aircraft, and I'm glad to say that in the UK a couple of examples lived a far more exciting life. Before WWII broke out, Sidney Cotton, a WWI Navy pilot, inventor of the Sidcot suit, and perhaps even the inspiration for the character of James Bond, was approached by MI6 who asked him to use the pretext of visits to his European business partners to gather aerial shots of German military installations. So in 1939, a Lockheed 12, G-AFTL, was registered to British Airways Ltd of Grosvenor Gardens, London SW1 (check it out on the CAA's G-INFO). Three cameras were fitted and rigged to take pictures by pressing a button under the pilot's seat. To extend the range, extra tanks were fitted, and despite Lockheed agreeing that the weight wouldn't be a problem, the UK authorities decreed that full fuel shouldn't be loaded. Cotton, who had a strained relationship with officials, arranged for the tanks to be 'mistakenly' filled when needed. On his first 'overweight' take-off he made a point of circling the Tower while waving to them.

Cotton flew the aeroplane all over Germany 'on business', and even managed to engineer a flight by inviting a German Luftwaffe officer, Albert Kesselring, to fly the aeroplane. Cotton then took the required pictures by reaching under the seat and firing the shutter while Kesselring unknowingly flew on. As war drew closer, Cotton was forced to leave Germany and claimed to be the last civilian flight to leave the country; that has become the subject of a book, *The Last Plane Out of Berlin*.

David Marco's Lockheed journey began in 2009 when he bought NC18097. At the time it hadn't flown for a couple of years, so it was ferried to Chino in California where a small team set about making it perfect. The entire interior was removed and reworked, all of the electrical system, wire, switches, fuses, etc were stripped out and replaced with new components. The landing-gear was taken off, stripped, NDT tested, painted and all the fuel, oil and hydraulic lines were replaced with new. Finally both engines and props were overhauled and the entire aeroplane was finished in its original Phillips

### Lockheed C-40B – Oh dear! What on earth were they thinking?

**THERE AREN'T MANY** aircraft that look better with a nosewheel, and the C-40B isn't the rule-proving exception. History doesn't record the name of the muppet who thought this might be a good idea, but in 1938 the US Army Air Corps ordered 14 military versions of the Lockheed 12A. Thirteen were delivered and one remained at the factory where it was butchered and a fixed-

gear nosewheel added. The aircraft was delivered to Wright Field Ohio, presumably at night so nobody saw it and laughed. Performance tests were carried out and it was found to be significantly slower than the taildragger. Less than a year later, the aircraft was returned to its conventional configuration and the world instantly became less ugly. Hurrah!



Look. Savour. Touch.



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Petroleum colours. The 20-month restoration took 10,000 hours and \$600,000.

### Majestic progress

With care, the aeroplane was pulled out of the operating theatre – sorry, I mean hangar, into the bright Florida sunshine to be prepped for flight. There's no part of this aeroplane that disappoints; 1930s' design engineers may not have had access to computational fluid dynamics, finite element analysis or CAD, but they had an eye for style and beauty, and up close the detail is achingly gorgeous. The work that's been done is astounding. Crawl underneath and put your head into the wheel well and it's spotlessly clean. Poke a torch inside the wing it's spotlessly clean, look inside the flap... again, spotlessly clean. To look at it you'd think that it was rarely flown, but it takes to the air most weeks, and by the look of it gets cleaned most days.

David opens the rear door and invites me into the cabin. This is the type of aeroplane that makes you want to check the soles of your shoes for dirt before you dare set foot onto its carpet. In front of

the door, and the first thing you see is the original, perfectly restored, coffee station with two wall-mounted flasks and a paper cup tube. The combination of painstaking attention to detail, extensive research and amazing craftsmanship has resulted in a truly exquisite interior. Every single fitting is perfect, every seat mechanism functioning, even the type of the wool used to weave the headliner is authentic. Sitting in the aeroplane and talking through the restoration with David I spot that all of the screws fixing a piece of trim have their heads perfectly aligned. When I mention this the reply, said with a little surprise is, "Of course, why wouldn't anyone do that?"

As you can see, the work didn't stop at the entrance to the cockpit; step over the spar, sit in either of the seats and just absorb the atmosphere. Every single instrument has been overhauled and remarked in perfect 1930s style, every lever, every handle and every control has been restored to its original condition (or perhaps even better). The only concession to modern aviation is a Garmin stack that can be hidden by an autopilot faceplate when required. ▶



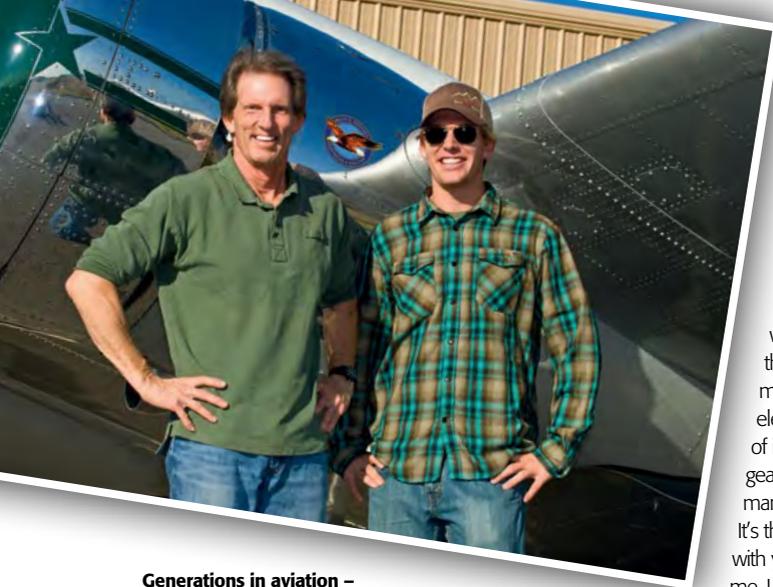
All bare metal has been polished to a mirror finish, which means even more care is taken when fuelling

Outside, the fuel truck has arrived and the sun is slowly making its way towards the golden hour so loved by photographers. Steps are needed to check engine oil and to climb on the wing to help with fuelling – the Lockheed has four tanks, two per wing and between them you can put in 200usg. That's a lot of fuel, but if you're burning 28 gallons an hour per side at high speed cruise, it'll come in handy! The propellers are both pulled through to make sure that there's no oil pooling in the bottom of the engine – hydraulicing thanks to an oil-filled cylinder is expensive.

With outside duties complete, we climb in and buckle up. It's a big aeroplane but extra space wasn't

wasted on the flight deck so while it's not a tight fit, there's not that much room to spare either. The engines start very easily and, while we wait for things to warm up, I try to imagine what it would have been like for the pilots to operate these as corporate transport. Time to pay attention, time to taxi, time to look out for the tips of those long wings, time to wonder how much of a view out there will be through the letterbox-shaped front window.

Following the St. Johns River south, I play in the silky air, climbing, descending, turning and flying orbits left and right. This is a tactile aeroplane – the leather control wheel, the Bakelite throttles, the little elevator trim that was positioned low and to my



**Generations in aviation – David with pilot son Mike**

left... It's very stable and there's a little bit of adverse yaw, but the overall feeling is one of majestic progress. When you're in a nice gentle cruise there's no wrestling with the controls, no abrupt jockeying of throttles, no coarse trim changes, no shocks. Well, actually that last bit is not quite true. Flying for the photos meant flying slowly at times, and if you've got the gear up and the manifold pressure low there's an almighty warning horn that I'm sure was heard as far south as Miami. Having experienced the volume that is the Lockheed in take-off mode, I can only assume that the engineers back at Burbank assumed that any Lockheed pilot would be pretty much deaf by the time they'd finished converting onto the aircraft.

Reluctantly, with light fading and no more photos to take, it was time to head back to Craig. It may have been majestic, but it had also been pretty intense and I was happy to hand her back to David for the landing; it had been a perfect afternoon so far, and I didn't want to end it by bouncing a million bucks worth of art deco mechanical sculpture. David greased the landing and we rolled to stop outside his

hangar as the sun finally dipped below the horizon.

It's been nearly three months since my encounter with the Lockheed and I don't think a day has gone by without me thinking about either its elegant lines, the hypnotic rumble of its engines, the scream of the gear warning horn or any one of many other sensory memories. It's the kind of aeroplane that stays with you, at least that's how it is for me. I made some notes after the flight, power settings, speeds – that

sort of thing – but it seems a bit vulgar to describe the little Lockheed 12 using mere numbers.

She's a grand old lady and she's performing at least as well now as the day she came out of the factory. If you really want to know the numbers, Google is your friend, but I think I'll leave it at that. ■

**Had you wanted to buy one in 1937, you would have been spending \$39,500**



## TECH SPEC

### Lockheed 12A Electra Junior



#### ■ DIMENSIONS

**Wingspan**..... Same as a Lear 45, but more elegant  
**Length**..... Long, slim, beautiful  
**Height**..... You'll need steps to clean the screen  
**Cabin width**..... More than enough

#### ■ WEIGHTS & LOADING

**mtow**..... Not so heavy that you need a rating  
**Empty weight**..... You'll need a tug to move it  
**Useful load**..... You, a loved one and closest friends

#### ■ PERFORMANCE

**Maximum cruise**..... Fast enough, what's the rush?  
**Stall speed**..... Why spill the passengers' drinks?  
**Best rate of climb**..... Makes it very loud in the cabin  
**Range**..... Sit back, and enjoy the ride  
**Take-Off**..... Makes people stop and stare  
**Landing roll**..... Stay sharp till it's stopped

#### ■ ENGINES

Two, dependable Pratt & Whitney

#### ■ PROPELLERS

Two. Big. Polished. Loud. Beautiful.

#### ■ PRICE

Cheap things are rarely valuable and valuable things are rarely cheap.

#### ■ MORE INFORMATION

[www.generationsinaviation.com](http://www.generationsinaviation.com)

The light fades, the engines cool, the memories are fixed...

